

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection**

P031972177

FACILITY: EAGLE ALUMINUM CAST PRODUCTS INC.		SRN / ID: P0319
LOCATION: 2134 NORTHWOODS DRIVE, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Mike DeVoursney , President		ACTIVITY DATE: 06/05/2024
STAFF: Eric Grinstern	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced compliance inspection		
RESOLVED COMPLAINTS:		

Facility Description

Eagle Aluminum Permanent Mold Casting Inc. is a permanent mold foundry that produces aluminum castings. The facility is primarily surrounded by undeveloped land as well as industrial and manufacturing businesses.

Regulatory Overview

The facility holds one active NSR permit (PTI No. 30-12B) which addresses all permitted processes at the facility. PTI No. 30-12B was issued in 2022, to modify PTI No. 30-12A to allow for the installation of two 900-pound crucible furnaces and to remove one 600-pound furnace along with the pattern production equipment. The facility was previously determined during NSR permitting to be an existing source when evaluated for applicability to the Aluminum, copper, and other nonferrous foundries area sources NESHAP, Subpart ZZZZZZ. As part of this inspection, the facility provided records documenting that their metal melt production remains below the applicability threshold of 600 tons per year. (2022: 345 tons, 2023: 188 tons, projected 2024: 391 tons)

Compliance Evaluation

Prior to entering the facility, AQD staff consisting of Eric Grinstern (EG) conducted a survey of the facility from the public roadway. No odors or visible emissions were noted coming from the facility.

At the facility, EG met with Mike DeVoursney, President. Mr. DeVoursney provided a summary of the facility operations. The facility was previously a part of the Eagle Group of facilities until Mr. DeVoursney purchased the plant seven years ago.

The facility currently has 18 workers. The facilities primary hours of operation are 05:00 to 15:00, Monday through Thursday.

Below is a compliance summary of the facility.

FG-FURNACES

Melting is performed in seven gas-fired crucible furnaces, (4) 1,000 lb. holding capacity furnaces, (2) 900 lb. holding capacity furnaces, and (1) 600 lb. holding capacity furnace. All of the furnaces vent to the outside atmosphere uncontrolled. The facility only melts spec aluminum ingots and in-plant returns. Molten aluminum is hand ladled into the permanent molds. The facility uses air set and shell cores in approximately 20% of the castings. The facility purchases all of the cores that are used on-site.

The facility fluxes with the same flux that was evaluated during permitting. The facility uses a Foseco automated subsurface degassing and fluxing unit that records the amount of flux used.

Emission Limits

The permit limits PM emissions to 0.10 pound per 1,000 pounds of exhaust gases. Compliance with the emission limit can be determined through testing, which has not yet been required.

Material Limits/Recordkeeping

The permit limits the facility to only melting clean charge, customer returns, and internal scrap to avoid applicability to Subpart RRR. The facility stated that only spec aluminum and internal runaround is melted. During the inspection, no unclean aluminum was observed on-site.

The facility is limited to no more than 8 pounds of flux per hour in FG-FURNACES in hours that flux is added and 15,900 pounds of flux per year on a 12-month rolling time-period basis. The facility is required to maintain hourly, monthly and 12-month rolling time period records of flux usage. The facility provided requested flux use records (previous 30 days of 8-hour flux records, and previous 12-months for monthly records). Review of the flux usage records show the facility using a high of 5.6 pounds per 24 hours, which is well below the 8 pounds per hour limit. The monthly records show a high usage of less than 100 pounds per month and a 12-month rolling total high of 722 pounds, which is well under the 15,900-pound limit.

The facility is restricted to only burn pipeline quality natural gas in the furnace. No other source of gas was observed during the inspection.

The permit limits the amount of metal melted to 20,000 pounds of aluminum every 10 hours in FG-FURNACES. The facility is required to maintain records of the amount of aluminum melted on a 10-hour basis. The facility provided requested melt records (previous 30 days of 10-hour records). The highest recorded usage was 4,337 pounds of metal melted on a 24-hour basis, which is well below the 10-hour limit of 20,000 pounds.

FG-MOLD

FG-MOLD addresses six (6) permanent mold machines. The mold machines are heated and have release coating applied about once an hour. The mold machines vent to the in-plant atmosphere. The permit does not contain any restrictions related to the mold machines.

FG-FINISHING

FG-FINISHING contains the various finishing operations, including shotblasting, grinding, torching, cutting, and welding. All of the finishing processes are vented to the in-plant atmosphere. The shot blast unit is equipped with a dust collector that vents to the in-plant atmosphere. The permit does not contain any restrictions related to the finishing operations.

Conclusion

Based on the information and observations made during this inspection, the facility appears to be in compliance with applicable air quality rules and regulations.

NAME *Eric Grinstern*

DATE 06/20/2024

SUPERVISOR *HH*